

Title (en)

CARBURIZED AND QUENCHED MEMBER AND METHOD FOR PRODUCTION THEREOF

Title (de)

AUFGEKOHLTES UND ABGESCHRECKTES ELEMENT UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

ELEMENT CARBURE ET TREMPÉ ET SON PROCÉDE DE PRODUCTION

Publication

EP 1550736 A4 20050706 (EN)

Application

EP 02790874 A 20021225

Priority

- JP 0213561 W 20021225
- JP 2001392410 A 20011225

Abstract (en)

[origin: EP1550736A1] Provided are a carburized and hardened member that allows strength enhancement while sufficiently reducing the hardening strain, without increasing the production cost, and a production method for the carburized and hardened member. An alloy steel which contains Fe as a main component and contains 0.10 to 0.50 wt.% of C and 0.50 to 1.50 wt.% of Si and whose hardenability J based on an end quenching test is in a range of 35 to 50 (at 12.5 mm) is used as a raw material. After the material is formed into a member of a desired shape, a carburized layer is formed by performing a carburizing process in an oxidation inhibitive atmosphere. After the carburizing process, a quenching process is performed in a condition that cooling is monotonously performed from a pearlite transformation point (A1 point) to a martensite transformation start point (Ms point), and a condition that a severity of quenching H is in a range of 0.01 to 0.08 (cm<-1>). <IMAGE>

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IPC 8 full level

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CPC (source: EP KR US)

C23C 8/22 (2013.01 - EP KR US); **C23C 8/80** (2013.01 - EP US)

Citation (search report)

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